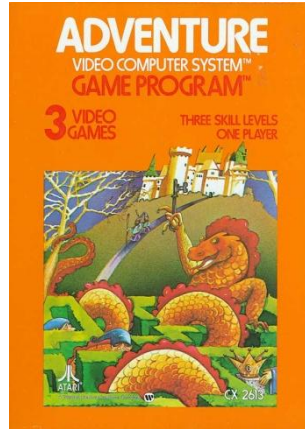




GAM0183 Game Programming

Smallest compilable program.

Lecture 6

X is room.

INFORM 7 Language Part A

INFORM 7 is the most natural language-like programming language in the world.

based on Inform 7 Examples & Snippets @ <http://www.hpiweb.com/newmedia/>
by John Timmons

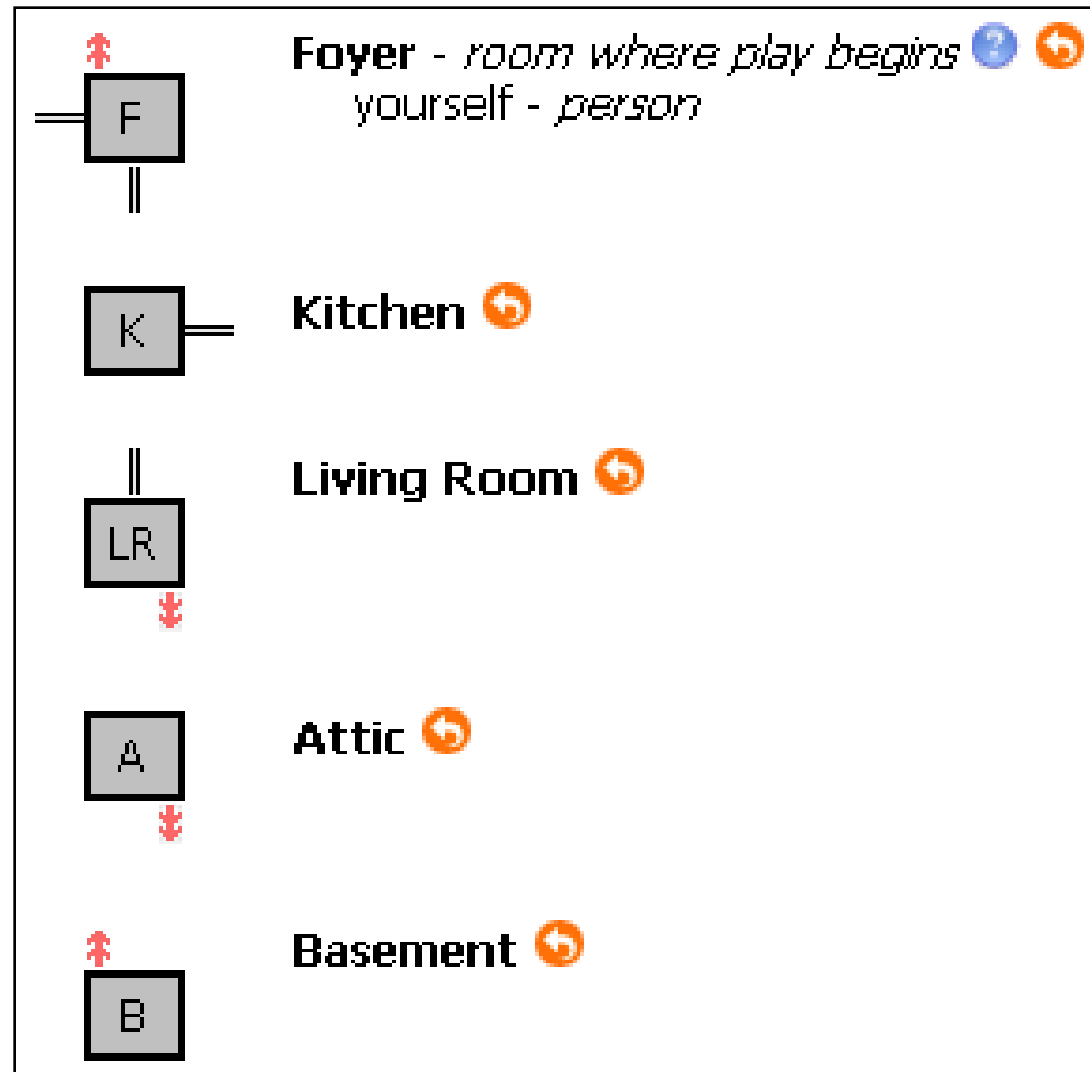
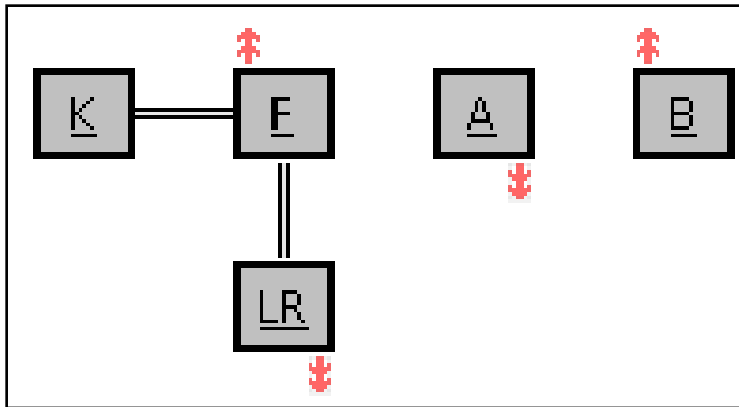
The Foyer is a room. "The Foyer is an austere space containing no furnishings. You can see exits east, south, and stairs that lead up."

The Kitchen is west of the Foyer. "The kitchen is a modern design and is remarkably clean. There is an exit west."

The Living Room is south of the Foyer. "Tastefully furnished, the living room seems like a very relaxing place. There is an exit north and stairs leading down."

The Attic is up from the Foyer. "This attic is filthy and has a strong musky odor. Stairs lead down from here."

The Basement is down from the Living Room. "The basement is comprised of concrete walls and floor illuminated by a solitary light bulb. Stairs lead up from here."



- ↻ highlights position in source code
- ? shows help on topic

Foyer

The Foyer is an austere space containing no furnishings. You can see exits east, south, and stairs that lead up.

>inventory

You are carrying nothing.

>south

Living Room

Tastefully furnished, the living room seems like a very relaxing place. There is an exit north and stairs leading down.

>down

Basement

The basement is comprised of concrete walls and floor illuminated by a solitary light bulb. Stairs lead up from here.

>undo

Living Room

[Previous turn undone.]

>look

Living Room

Tastefully furnished, the living room seems like a very relaxing place. There is an exit north and stairs leading down.

INFORM 7



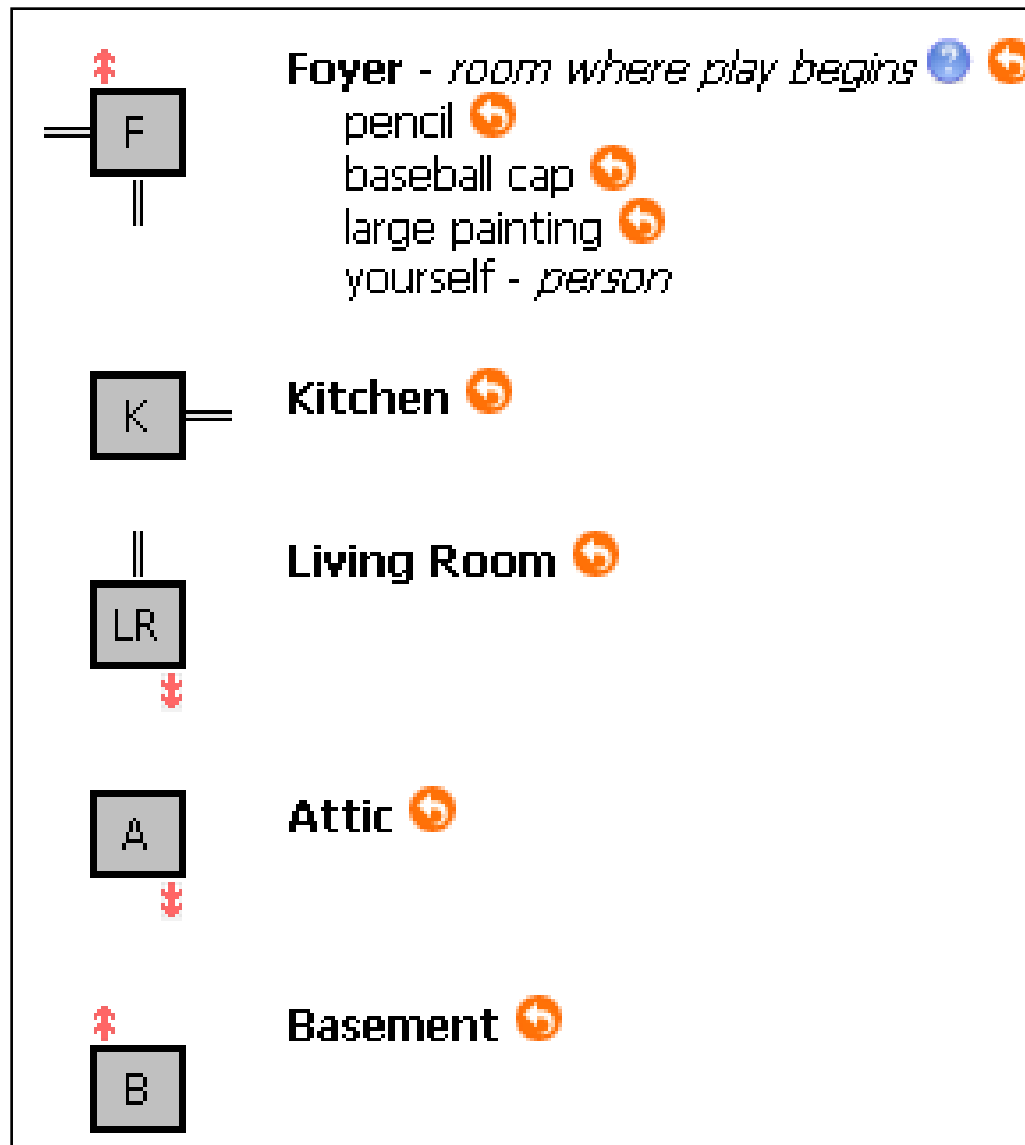
- The first room declared is the player's starting location.
- Rooms can be connected by the directions: north, south, east, west, northwest, northeast, southwest, southeast, up from, down from, inside from, outside from,...
- One-way exits can be accomplished by writing code like: "East of the Kitchen is nowhere."
- Room descriptions are normally displayed only once when the player enters the room for the first time. To view the description again, the player must type "look". This default behaviour can be changed by writing: "Use full-length room descriptions." near the beginning of the program.
- Rooms have the default property of being lit. A room in total darkness can be created by writing code like: "The Foyer is a dark room."

The Foyer is a room. "The Foyer is an austere space containing no furnishings. There is a large painting on the wall. You can see exits east, south, and stairs that lead up."

The large painting is scenery in the Foyer. "The painting is huge: over ten feet tall and six feet wide. It depicts a hunting party that seems to have gone terribly wrong."

The pencil is in the Foyer. "There is a discarded yellow pencil here." The description is "Freshly sharpened and covered with bite marks, it is a good old #2 yellow pencil."

The baseball cap is a wearable thing in the Foyer. "There is a discarded yellow baseball cap here." The description is "The logo on the front has faded and no longer readable. Inside the cap, a label says one-size fits all."



Foyer

The Foyer is an austere space containing no furnishings. There is a large painting on the wall. You can see exits east, south, and stairs that lead up.

There is a discarded yellow pencil here.

There is a discarded yellow baseball cap here.

>examine painting

The painting is huge: over ten feet tall and six feet wide. It depicts a hunting party that seems to have gone terribly wrong.

>examine cap

The logo on the front has faded and no longer readable. Inside the cap, a label says one-size fits all.

>put on cap

(first taking the baseball cap)

You put on the baseball cap.

>pick up pencil

Taken.

>inventory

You are carrying:

a pencil

a baseball cap (being worn)

play

INFORM 7

- A thing like the pencil can be picked up, carried, and dropped.
- Things in a room are, by default, mentioned when a player enters a room.
- “The description is” text is displayed whenever the player deliberately examines a thing.
- Things can have the properties: edible (can be eaten), wearable (the player can wear it), and fixed in place (it is not portable),...
- Scenery is always fixed in place and needs to be examined. Scenery descriptions are not automatically displayed when the player enters a room.
- You should have noticed by now that identifiers in INFORM 7 can have spaces and that identifiers can be referred to by using only one of the words.
 - baseball cap/cap

The jar is a closed openable container in the Kitchen. "There is a jar." The description is "It is a round clay jar with the word Cookies printed on the side."

A chocolate chip cookie is in the jar. It is edible.

Kitchen

The kitchen is a modern design and is remarkably clean. There is an exit west.

There is a jar.

>examine jar

It is a round clay jar with the word Cookies printed on the side.

>open jar

You open the jar, revealing a chocolate chip cookie.

>take cookie

Taken.

>examine cookie

You see nothing special about the chocolate chip cookie.

>eat cookie

You eat the chocolate chip cookie. Not bad.

>close jar

You close the jar.

>open jar

You open the jar.

INFORM 7



- Objects can be put into and taken out of containers.
- Containers will be listed by default when a player enters a room.
- Containers can have the properties:
 - open (is open)
 - closed (is closed)
 - openable (can be opened and closed)
 - locked (is locked)
 - lockable (can be locked and unlocked)
 - transparent (see through)
 - “look in jar” without opening

The Foyer is a room. "The Foyer is an austere space containing no furnishings. There is a large painting on the wall. You can see exits east, south, and stairs that lead up. There is a breeze."

The Breeze is a backdrop. It is everywhere. "An open window allows a pleasing cool summer breeze everywhere."

The recliner is an portable enterable supporter in the Living Room. The description is "The big recliner looks like it would be extremely comfortable to sit in."

The coffee pot is a switched off device in the Living Room.



scenery



backdrop



device

Foyer

The Foyer is an austere space containing no furnishings. There is a large painting on the wall. You can see exits east, south, and stairs that lead up. There is a breeze.

There is a discarded yellow pencil here.

There is a discarded yellow baseball cap here.

>examine breeze

An open window allows a pleasing cool summer breeze everywhere.

>south

Living Room

Tastefully furnished, the living room seems like a very relaxing place. There is an exit north and stairs leading down.

You can see a recliner and a coffee pot here.

>examine breeze

An open window allows a pleasing cool summer breeze everywhere.

>take recliner and pot

recliner: Taken.

coffee pot: Taken.

>down

...

Basement

The basement is comprised of concrete walls and floor illuminated by a solitary light bulb. Stairs lead up from here.

>sit on recliner

You can only get into something free-standing.

>drop recliner

Dropped.

>sit on recliner

You get onto the recliner.

>switch on pot

You switch the coffee pot on.

INFORM 7

- Backdrops are like scenery. They need to be mentioned somehow in a room's description and examined by the player.
- Backdrops can be everywhere or in specific rooms, for example: "It is in the Foyer, Kitchen, and Living Room."
- Properties of supporters are:
 - portable (can be carried by a player)
 - enterable (can be sat on or stood on)
- Properties of devices are:
 - switched on
 - switched off



puzzle

A chair is a kind of supporter that is enterable.
The couch is a chair in the Living Room.
The stool is a chair in the Kitchen.

The Bedroom is east of the Living Room.
The night stand is a supporter in the Bedroom. The description is
"The night stand appears alone and small against the wall. It has
one drawer."

The drawer is a openable closed container and part of the night
stand. A green key is in the drawer.



Foyer

The Foyer is an austere space containing no furnishings. There is a large painting on the wall. You can see exits east, south, and stairs that lead up. There is a breeze.

...

>south

Living Room

Tastefully furnished, the living room seems like a very relaxing place. There is an exit north and stairs leading down.

You can see a recliner, a coffee pot and a couch here.

>east

Bedroom

You can see a night stand here.

>examine night stand

The night stand appears alone and small against the wall. It has one drawer.

>open drawer

You open the drawer, revealing a green key.

>take key

Taken.

play

INFORM 7

- New things can be created using “a kind of”.
 - making a subclass
- It is easier to remember what a chair is rather than what a “enterable supporter” is.

Kinds

object

room [6] 
thing [14] 
 door  
 container [2] 
 vehicle  
 player's holdall  
 supporter [4] 
 chair [2]   
 backdrop [1]  
 person [1]  
 man 
 woman 
 animal 
 device [1]  
 direction [12] 
 region 

Where other languages say class,
INFORM 7 says kind.

The built-in class hierarchy in INFORM 7
has a total of only sixteen classes.

In the example to the left, a new class has
been created: chair.

Remember that the language has been
designed to support the creation of
interactive fiction: works of art, not
industrial or commercial software.

 show definition

INFORM 7 'definition': room

room (*plural* rooms)

Represents geographical locations, both indoor and outdoor, which are not necessarily areas in a building. A player in one room is mostly unable to sense, or interact with, anything in a different room. Rooms are arranged in a map.

Usually lighted *not* dark, unvisited *not* visited.

INFORM 7 ‘definition’: container

container, a kind of thing (*plural* containers)

Represents something into which portable things can be put, such as a teacheast or a handbag.

Something with a really large immobile interior, such as the Albert Hall, had better be a room instead.

Usually opaque *not* transparent, open *not* closed, unopenable *not* openable, unlocked *not* locked.

Usually not enterable, lockable.

Can have carrying capacity (*a number*).